

 Advocate Health Care	Title: ACH Pediatric Authorized Agent-Controlled Analgesia (AACA)
	<input checked="" type="checkbox"/> Policy <input type="checkbox"/> Procedure <input type="checkbox"/> Guideline <input type="checkbox"/> Other:
	Scope: <input type="checkbox"/> System <input checked="" type="checkbox"/> Site: ACH Department: Pediatric

I. **PURPOSE**

The purpose of this policy is to establish guidelines for the care of the pediatric patient receiving Authorized Agent-Controlled Analgesia (AACA) and to provide patients with a mechanism to control their pain when they may be unable to physically or cognitively press the PCA for self-administration of opioid pain medication.

This policy applies to pediatric patients under the care of Advocate Children's Hospital OL and PR campus (ACH) receiving Authorized Agent-Controlled Analgesia (AACA).

II. **POLICY**

It is the policy at ACH that patients receiving Authorized Agent-Controlled Analgesia (AACA) will be cared for by ACH staff nurses knowledgeable in Authorized Agent-Controlled Analgesia (AACA) and the PCA pump.

III. **DEFINITIONS/ABBREVIATIONS**

Authorized Agent-Controlled Analgesia, AACA (PCA by authorized proxy)–

An individual who is educated and authorized to activate PRN doses by utilizing the PCA button via a PCA pump. A registered nurse (RN) may be designated as the primary pain manager for the patient. Only the RN or designated person can administer, for the patient, the prescribed dose of analgesia by pushing the button on the hand-held control device

PCA AACA only – the proxy-administers a prescribed dose of analgesic medication by pushing the button on the hand-held control device.

Basal Rate (Continuous Infusion) plus AACA – the patient receives a continuous infusion of analgesic medication at a prescribed rate plus the option to receive a proxy administered specified dose of analgesia using the hand-held control device.

Basal Rate (Continuous Infusion) only AACA – the patient receives a steady infusion of analgesia medication at a prescribed rate.

Bolus Dose - an amount of IV medication administered rapidly to decrease the response time or to be used as a loading dose prior to an infusion.

Candidates for Authorized Agent Controlled Analgesia

- A. Reside within either ACH-OL or PR
- B. Patients developmentally or cognitively unable to activate their own PCA
- C. Patients unable to understand a relationship between pain relief with button presses
- D. The patient does not have a preexisting condition such as sleep apnea, or have increased level of sedation that could increase or potentiate risks

IV. PROCEDURE

- A. Prerequisite Conditions for Nurse driven AACA
 - 1. Pain Service Consultation **OR**
 - 2. Palliative Service Consultation **OR**
 - 3. Patient must reside in PICU and ordered by pediatric intensivist
- B. Prerequisite Conditions for Parent/Guardian driven AACA
 - 1. Pain Service Consultation **OR** Palliative Service Consultation
 - a) When a parent or guardian is chosen to be the proxy for the patient prescriber needs to take into account the cognitive ability of the parent as well
 - b) Parent or guardian proxy must be present at all times
 - c) Parent or guardian proxy must be made aware of the requirement and to notify the RN if leaving the patient for greater than 1 hour
 - d) Parent or guardian proxy must be aware that if they can no longer fulfill the requirements for any reason that either nursing or physician are notified
 - e) Only one person may be chosen for proxy for the patient. This person must be identified in the order
- C. The RN or designated proxy must be able to:
 - 1. Accept the responsibility of Authorized Agent Controlled Analgesia and be able to frequently assess patient for pain
 - 2. Accepts and understands patient's report of pain
 - 3. Understand the goal of patient's pain management plan
 - 4. Recognize the signs and symptoms of patient's pain
 - 5. Recognize and acknowledge the side effects and adverse reactions to the pain medication, including signs of over sedation

- D. Nursing units caring for patients receiving AACCA will have a crash cart and naloxone readily accessible
- E. Only one proxy may be designated for each patient. The proxy needs to be clearly identified within the order
- F. Attending physician or advance practice clinician will complete the PCA power plan in the EMR
- G. Initiation of AACCA will occur with attending physician or advance practice clinician present in the hospital
- H. All titrations of the AACCA will be prescribed by either the Pain or Palliative Service or PICU attending

Guidelines for prescribers

- I. Consider the following factors before initiating an AACCA:
 - 1. Age
 - 2. Body weight; i.e. Obesity or Low body weight
 - 3. Preexisting conditions such as asthma or sleep apnea
 - 4. Concomitant medications that may potentiate the sedating effects should be avoided when possible; i.e. benzodiazepines, sleep aids
 - 5. Patient's tolerance to opioids

Initiation of Infusion

- J. AACCA must be run with continuous intravenous fluids, NOT with bolus fluids or by itself. Fluids should be ideally infused at 10 ml/hr but may be ordered at the discretion of the ordering physician based on individual patient's fluid requirements
- K. An RN proficient with AACCA/PCA pump operations will
 - 1. Review the order and ensure a proxy has been identified
 - 2. Select the appropriate library
 - a) Please note regardless of age, all patients residing in the children's hospital will be placed in a pediatric PCA library
 - 3. Select the appropriate weight
 - 4. Initiate infusion in accordance to the provider's orders
 - 5. Will perform independent verification prior to initiating the infusion or with any program changes
 - 6. Connect patient to the infusion
 - 7. Will notify RT for all PCAs with Capnography ordered

Infusion Adjustment Guidelines

- L. An RN may:

1. Adjust the rate of the AACA infusion according to the order. Rate adjustments must be done in accordance to 2 RN check and independent verification process
2. Decrease or stop an AACA infusion prior to notifying a physician if patient exhibits any of the following:
 - a) Sedation score of 4
 - b) Respiratory depression
 - (1) A rate less than prescribed on AACA order
 - c) Oxygen desaturation
 - d) Apneic events
 - e) Capnography alarms
 - f) Disorientation
 - g) Blood pressure or heart rate falls below set parameters as outlined in the AACA order
3. Any additional bolus dosing should be administered per physician or advance practice clinician's order

Monitoring

- M. A RN will
1. Obtain and document a respiratory rate, blood pressure, heart rate, sedation level, pain score and side effects on initiation of AACA, then Q 1 hour X 4 hours, then Q4 hours
 2. Resume Q1 hour vital signs X4 hours after every change in AACA
 3. Continuous pulse oximetry will be initiated at this time and remain in place for the duration of PCA therapy – exception is end of life. Use of pulse oximetry would then be at the discretion of the ordering physician
 4. When feasible consider capnography
 5. Utilize capnography when feasible when comorbid conditions (OSA, obesity, high opioid consumption) are present – exception is end of life
 6. Assess pain level using age and developmentally appropriate scale every 4 hours and whenever patient expresses pain
 7. Assess level of sedation every 4 hours and PRN
 8. Assess presence of side effects (nausea, vomiting, pruritus, and urinary retention) every 4 hours and whenever patient complain of a side effect
 9. Assess IV site every hour for redness, soreness, drainage, and edema
 10. Visually assess security and patency of PCA system every hour

Notification of Physician or Advance Practice Clinician

1. Excessive or increasing level of sedation
2. Respiratory rate less than 10 breaths/minute for adolescent patients; and less than 12 breaths/minute in children, changes in respiratory pattern, or evidence of airway obstruction.
3. Oxygen desaturations

4. Apneic events
5. Capnography alarms
6. Altered mental status: confusion, disorientation, or hallucinations
7. Unrelieved pain
8. Unrelieved side effects
9. Blood pressure or Heart Rate falls below set parameters as outlined in order.

Naloxone

1. All PCAs orders will have a standing order for naloxone
2. RN should notify physician, stop infusion and administer standing order of naloxone if:
 - a) Opioid Sedation score is 4
 - b) Respiratory rate is <8 in adolescent or < 10 in a child, administer supplemental O2
3. When naloxone is given:
 - a) RN to perform frequent vitals at minimum every 15 minutes for 120 minutes
 - b) PICU should be notified

Documentation

- N. Attending physician or Advance Practice Clinician will order pediatric AACA
 1. Designation of the proxy will be placed within the order itself and documented in the medical record
- O. A RN will document at minimum on PCA Flowsheet:
 1. Initial setup
 - a) 2 RN signatures required
 2. Every 4 hours
 - a) Clear pump settings
 - b) Document total dose received
 - c) Document number of attempts both completed and denied
 - d) Pain rating utilizing developmental and age appropriate scale
 - e) Level of sedation
 - f) Respiratory rate
 - g) Side effects
 - h) Non-pharmacological interventions
 3. As appropriate:
 - a) Bolus administration
 - b) Vial Change
 - c) Opioid infusion wastage including:
 - (1) Date
 - (2) Time
 - (3) Amount
 - (4) Two signatures required
 - d) Change in therapy
 - (1) 2 RN signatures required

V. CROSS REFERENCE

Not Applicable

VI. REFERENCES

Kenagy, A., & Turner, H. (2007). Pediatric Patient Controlled Analgesia by Proxy. AACN, 18(4), 361-365.

Monitto, C.L., Greenberg, R.S., Kost-Byerly, S., Wetzel, R., Billett, C., Lebet. R.M., & Yaster, M. (2000). The Safety and Efficacy of Parent-/Nurse-Controlled Analgesia in Patients Less than Six Years of Age. *Anesthesia Analog 91*: 573-579.

Voeopel-Lewis, T., Marinkovic, A., Kostrzewa, A., Tait, AR., Malviya, S. (2008). The Prevalence of and Risk Factors for Adverse Events in Children Receiving Patient Controlled Analgesia by Proxy or Patient Controlled Analgesia after Surgery. *Pediatric Anesthesiology*, 107(1), 70-5.

VII. RELATED DOCUMENTS/RECORDS

Not Applicable